

AMERICAN BEE JOURNAL

ESTABLISHED 1861
THE OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY
TO THE INTERESTS
OF HONEY-PRODUCERS

MASSACHUSETTS AGRICULTURAL COLLEGE

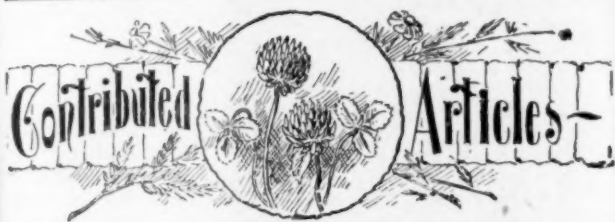
Published Weekly, at \$1.00 per annum.

Sample Copy sent on Application.

36th Year.

CHICAGO, ILL., APRIL 30, 1896.

No. 18.



How Honey-Producers Can Help Themselves.

BY EMERSON T. ABBOTT.

Honey-producers, falling in with the general drift of things in these times, seem to have gotten the idea that there is only one road to success, and that is by having the Government or some combination of men do for them what they confess by their theories they are not able to do for themselves—namely, make life a success in their chosen calling.

I believe in organization, in unity of action, but I also believe in individuality, in personal effort, and liberty. We are drifting very close to the danger-line, in this matter of organization, it seems to me, when we begin to talk of combining to "compel men" to do what we want done. It is a favorite saying of mine that all I want is health and to be let alone. The man who enjoys the privilege of these two God-given blessings, should be able to at least hold his own, and keep his head above water. If he is not, it will only be an application of the doctrine of the "survival of the fittest" to let him go under. Crutches and Government help should be reserved for invalids, cripples, and the constitutionally weak. A man who enjoys a fair degree of health, and has all the opportunities earth offers to obtain a livelihood, should hesitate a long time before he asks aid from any source. But this is not what I started to write about.

I was impressed by a little incident which I read the other day, from the pen of Mr. Terry, under the head of "How to Increase Consumption." He and a friend sat down to dinner at a hotel. They found little dishes of very nice-looking butter beside their plates, but when they put their knives into it, it was not fit to eat. They also discovered that they had made a mistake and gone to the wrong hotel. They left the butter on the dishes, and left the hotel as soon as they got up from the table. Mr. Terry said that they would have eaten all of the butter on the dishes and called for more, had it been of the best quality, and this would have made a market for more butter; but as it was, the butter was left to glut an overstocked market—overstocked, I presume, with that kind of butter. All the laws and help in the kingdom could not create a demand for goods of that quality. Probably the man who sold it went home complaining that the price of butter had gone down below the cost of production. Perhaps it had, but there is no possibility of building up a market with any such a product.

Cannot the honey-producer learn something from this little incident?

I saw an advertisement in one of our city papers stating that two pounds of comb honey could be had for 25 cents at a certain store. I stepped in to investigate, and when I saw the honey I said, "Is that the stuff you sell two pounds for a quarter?" Turning to another lot, I asked, "What for this?" "Two pounds for 35 cents," was the answer. "This?"

"20 cents per pound. That is first-class. That came from the man in Colorado who knows how to put up honey. We got all he had. No trouble to sell that."

Investigation proved that honey was not so cheap, after all, for the first lot was not fit to put on any market. You say that such honey is put on the market by farmer bee-keepers who do not know anything about the business. Not always: I remember ordering honey once from a leading producer, who has set himself up for a specialist for years, and it was such a poor quality of extracted honey when it came that I had not the face to offer it to my regular customers. I sold it



Mr. J. M. Marvin—See page 277.

to a man down in the country who was looking for some cheap honey. It did not bring very much, but I should have called it dear at any price.

Now, for the other side: I ordered some extracted honey for my own use the other day from the alfalfa regions of Colorado, and I took occasion to say to the party to whom I sent, that the last honey I got of him was very fine, and I wanted some more of the same kind. He wrote back thanking me for the good words I had said for his honey, as I had taken pains to recommend it to others, and then he wrote a sentence which I commend to all extracted honey-producers, viz.:

"I have no trouble now in selling all the honey I can produce, without any advertising."

The italics are mine, but I do not want the reader to fail to get the force of this statement. It is refreshing in these

days when every other man you meet is complaining about how hard it is to sell anything. If the reader could eat some of this man's honey, he would soon understand why he was able to write such a cheerful account of his honey-trade. I know times are close, and people are forced to economize, but I am quite sure that Mr. Terry was not entirely wrong when he said that a good way to increase consumption was to produce only a first-class article.

I am reminded of a remark made by a little fellow when his mother had placed upon the table some bread of the kind of which he was very fond, and had eaten an unusually large quantity: "It pays to make this kind of bread!" There may have been some doubt in his mother's mind as to just how she was to apply his statement, but there could be none, if she had been placing bread on the market for sale, and all who ate it had been of the same opinion as her son.

It pays to make good goods, and when such goods are produced, the first place they should be offered is in the home market. No one should think of going elsewhere until he has worked this all it will possibly bear. The reader may think this advice is becoming an old story, but there are very few home markets that will not stand a little more pushing, if the goods are of the *very best quality*. If one has not done his utmost in this line, I am inclined to think that he will be a little surprised at the results, if he will go to work and push the sale of first-class honey in his own community. By all means do not waste any valuable time waiting for the coming of some great Honey Exchange to do for you what you may be able to do for yourself. There is entirely too much waiting for others to do the work these times. The Exchange may never come to you. If it does, it may not prove the ideal of perfection for which you have been looking. Most men are human, whether they belong to an Exchange or not.

Another thing which many may do to advantage, is to write and talk up the honey-business in their own locality. Here is a field which is bound to yield a bountiful crop, if properly cultivated. I do not mean by this that every beekeeper should aspire to become a professional writer, and in due time attach "Prof." to his name. Such titles are very cheap. Every negro barber is a "Prof.," after the style of some would-be professors. There is a great opportunity, however, for those who are willing to work, not for empty notoriety, but for the real enlightenment of the masses as to the great value of honey as a food product. Such work, if honestly and persistently done, is sure to bring good returns to the honey-producer. As productive employment always brings contentment, perhaps we may hear less complaint of close times, if the majority of producers can be prevailed upon to try these methods of helping themselves.

I trust no one will misunderstand me. I believe in mutual help, but I take a deal of satisfaction in helping myself and asserting my individuality, especially when I come to a really hard pull; and I think others will do the same, if they try it.

St. Joseph, Mo.



Sports of Character in Bees—Longevity.

BY F. L. THOMPSON.

On page 67, Dr. Miller doubts whether honey-bees carry off lilac leaves into their hives. An instance was reported in the *Bienen-Vater* last year in which bees were observed carrying the sticky scales of horse-chestnut buds into their hives, holding them in their mandibles. Another case was reported in the *Leipziger Bienenzeitung*, in which the scales of horse-chestnut buds were seen in the inside of hives, serving to plaster up the cracks made by manipulations in spring. Query: Are not lilac leaves sticky?

Speaking of bees carrying things in their mandibles, I have observed bees carrying dry sugar out of the hives by means of their mandibles. But from Italy comes a report that some bees were observed trying to pack grains of granulated honey (which was outside) on their legs, after they had sucked out and carried away the liquid part. Of course they did not succeed, but they kept up the attempt day after day.

The foregoing are not practical points, but to me they are interesting. Bees and ants, from an evolutionary point of view, have sometimes been referred to as possessing a Chinese sort of civilization—elaborate, but inelastic, with its development all in the past. But such things show that bees at least are still capable of a "sport," and tend to establish the fact that evolution is continuing, which is difficult to realize in our short lives and epochs. Dr. Gallup's observations, on page 824 (1895) may also have a bearing on this point. Perhaps not every colony would act as did the two he referred to.

Perhaps, too, this thought has a practical bearing. The

idiosyncrasies of different colonies in preparing themselves for winter may explain why otherwise similar colonies eventuate differently. One of my colonies builds very thin combs; its sections do not average more than three-fourths of a pound. The strip of honey which it leaves above the brood, besides being thin, is also narrow. Last June I discovered, just in the nick of time, that it was entirely out of stores, though its hive has a 10-Langstroth-frame capacity. Otherwise it is one of the best in the yard, having given me 78 completed sections in the past poor season. Such points should be watched in breeding.

Colonies of bees differ just as other animals do, and as persons do. Why may they not differ in their methods of work? Some people rush about in a nervous, flustered way, but do not seem to get much done, after all. Others get a good deal done without making much fuss about it. It seems to me quite possible that the bees of an excellent but non-prolific colony may not live any longer than others, and yet do a good deal more work.

Again, field-bees may have many other differences of character besides that of a greater or less inclination to sport around the hive, so that I feel like saying that not only is it a difficult question to decide why some colonies are better than others, but that it cannot be decided at all, because behavior in the field may have as much, or more, to do with it than behavior around the hives. This theory cannot be proved—but it cannot be disproved, either.

About the best thing we can do in breeding, besides noting comb-building and other points which are visible, is, I think, to judge by results in surplus. There are too many chances of error in attempting to apply these unproved principles, though in most cases I think it all right to theorize. It is enough that we know a good queen chiefly by the proportion between the surplus honey of her colony and the amount of its brood. That is one good point that the discussion on longevity has emphasized, even though it should turn out that longevity may not account for all cases.

I do not understand why a large size of thorax should make any difference. The big man is not necessarily the best fighter or the best runner. The main requirement is that he be well-proportioned. But we don't know enough about bee-gymnastics to judge when a queen is well proportioned, unless in exceptional cases. Lots of good queens have been only medium in size.

Arvada, Colo.



The Care of Comb Honey—Fumigation.

BY C. DAVENPORT.

In producing comb honey in order to have it stored in the sections in such a way that they can be readily handled and crated without injury, separators are with me a necessity, but I believe bees will work more readily and store a little more honey in the supers if no separators are used, but with me there is always so many of the combs bulged and built out so far that it is impossible to handle and crate them without breaking a good many of the combs, unless the sections are placed in the cases in the same order and exact position they occupied in the supers, and in handling a large amount this is not practicable. But if I was producing only a small amount of section honey, I would not use separators, for where only a small amount is produced such combs as cannot be readily crated can be used at home, or sold to neighbors.

I remove the supers from the hives as soon as the combs in the sections are capped, and use supers to keep it stored in until ready to crate it for market. It is much less work to handle and keep it in supers than it is to take the sections out and set them on shelves, or to put them in boxes, etc. Mine is stored in a warm, dry room, and two pieces of lath are put between each super in order to let the air circulate between them.

If at the time the supers are removed from the hives we do not have time to scrape and grade the sections, we at least take the wedges out and loosen the sections so that they can be easily taken out of a super at any time, for moths are generally very bad here for awhile during warm weather, and comb honey has to be watched pretty closely to keep it from being damaged by them; but it is only necessary to remove three or four sections from a super to find out whether it is or not.

I used to sulphur honey in the room in which it was stored, by burning the sulphur in a kettle, and letting the fumes pervade the whole room, but there would always be some honey that on account of being removed later, or some other cause, did not need sulphuring, so I would have to carry this out-doors or remove it somewhere, for I do not care to

sulphur it any more than is necessary; so I made a box as wide as the widest super I use, and about 10 inches high. A piece of sheet-iron is nailed over the entire top of this box—I think tin would answer as well—and a small door is cut out on one side. Then I have other boxes about 6 inches high without top or bottom, the size of the different supers I use, to set over the first box. A hole is cut out of each side of the top box, and a piece of glass fastened in.

When I wish to sulphur honey I set this iron-covered box right in the honey-room, put some sulphur on the center of the iron top, then take one of the top boxes, the size of the supers in which the honey is, and set it on top of this sheet-iron, then set the supers on this, and tier them up ten or more high, as the case may be, and put a cover on. A small lighted lamp is put through the door in the side of the lower box, so that it will be right under the sulphur, and for awhile through the glass in the upper box one can see how the sulphur burns, and regulate the heat as needed. This is much the easiest and most effective way to sulphur honey that I have ever tried. By leaving the windows of the room open it will not affect the rest of the honey, and no one need be afraid but what they can kill the moths by this plan, even if the supers and cover do not fit very closely; but it takes much less time and sulphur by this plan, and one has to be very careful not to use too much sulphur, or to leave the supers on too long, for if they do the honey will be colored.

Last summer we got but very little white honey here, and while I was away from home an inexperienced hand undertook to sulphur some honey by this plan. He took 11 supers of choice white honey and colored the combs and also the wood of the sections nearly as green as grass. I did not know what to do with them, but I thought perhaps soaking them in water might remove the stain, so I took the gearing out of one of the extractors, then set as many of the sections in the can as I could, and then filled it up with cold water in the evening. The gate was opened, and this water allowed to run out. It was then filled up with fresh water, and in the morning every particle of the coloring was gone from the combs and wood also, but the water caused the wood to swell, and a good many of the combs were nearly detached from the sections. These were placed on the hives again, and the bees soon fastened them all right. But if any have to be returned to the bees to be fastened in this way, I found out that if it is at a time when no honey is coming in, one has to use care and select colonies that have the brood-nest well filled, or else some of the honey in the sections will be carried below. If I had been careful about this, I would have saved all those sections without much loss.

With one of those boxes that I have just described, it is very easy to kill moths in brood-combs. All one has to do is to put some sulphur on the iron top, then pile on the hives and light the lamp, and no matter how big the worms, or how many there are, they can be killed in a very short time.

If one prefers, such a box can be set out-doors while the sulphuring is being done, and if there is not much wind, there is no need to put anything around the cracks between the hives, even if they do not fit very tight.

A NEW KIND OF TRAP FOR SWARMS.

In my next I will describe a new kind of trap to be used at swarming-time, which differs somewhat from those in general use, for while this trap when attached to a hive catches and confines a queen when a swarm issues, whether she is a laying queen or a virgin, it does not prevent the drones from leaving or re-entering the hive, for to do so neither they nor the workers have to pass through zinc. It appears that this trap will also allow a virgin queen to go out to mate, and then re-enter the hive. The trap is very simple in construction, and anybody can make it.

Southern Minnesota.



The House-Apiary—Eastern Shore Notes.

BY "MORTON'S BROTHER-IN-LAW."

Mr. J. H. Andre, on page 806 (1895) asks if the house-apiary isn't more objectionable than the chaff hive, because the sun's heat cannot penetrate the house and two inches of shavings besides the single wall of the hive. I cannot see why there should be any difference. But why does Mr. Andre desire the sun's heat to affect the temperature of the interior of a hive? Isn't that one of the main causes of spring-dwinding? It causes the bees to come out and fly when it is too cold to safely do so, and many never get home again.

In this connection, an incident came under my notice last spring in northern Pennsylvania (I am something of a "Ramblar" myself), which will bear telling.

In visiting an apiary of about 25 colonies, I found the bees all fastened tightly in their hives by a cigar-box nailed over the entrance, with wire-cloth over one side of it. It was well along into warm weather, too, and the bees had been flying freely on several occasions previous to my visit. The proprietor explained that he had noticed bees come out too early and died in the snow, so he "fixed 'em last fall that-a-way, and they are all snug and safe yet." That was a new way to me, and I urged him to release them right away, and give them a chance for life. To my surprise their long confinement had not injured them, as far as I could discover, and two weeks later those bees were working as well as you could ask them to—and he only lost two colonies, one of which was queenless.

To the bee-crank, this "Eastern Shore" (as they call that part of Maryland lying east of the Chesapeake Bay) possesses some interesting features. Oysters is their main industry, and honey cuts a very little figure. In Easton (the county seat of Talbot county) I found three sections of white clover honey which the grocer informed me had been plenty of stock for his trade for a month (two for a quarter)—and no other man kept honey at all! The town has about 5,000 inhabitants, and is a wealthy, stylish place surrounded by a fine country, where the majority of farms are on a water front, so Mr. Farmer can raise oysters, crabs, fish, terrapins, wild ducks, etc., as well as corn and wheat.

There are a few up-to-date bee-keepers in this county, but lower down the peninsula, in Dorchester and Wicomico counties, the great majority of bees are in "gums"—12x12x36—(that's standard!) and they "rob" once or twice a year—that is, by taking off the top of the hive and digging out combs as far down as they wish.

The wintering problem doesn't seem to bother any one down there. If that big bee-man from York State—who uses a 3-inch rim, a chaff hive, and a cellar just 45° for 160 days—could see how bees will "paddle their own canoe," and come through the winter in fine condition—with perforated zinc for a cover (upward ventilation, you see), or the end of the hive so rotted out that it fell away, exposing combs and bees to the naked eye, and yet do well the following season—he might decide to emigrate to "de Eesten Sho'."

Moths are the anxiety—not wintering—in this "neck of the woods." Mr. Radcliffe thinks his chickens have a checking influence with this pest. Morton seems to have a similar notion, for he turns his flock of Golden Wyandottes into his bee-yard every evening, and it is short on moths—very!

I was informed that there was "right smart o' bees" on "Hungry Neck," and went there to investigate. The first party interviewed had "right smart," but did not know exactly how many "gums" he did have, but "reckoned" less than 20.

No. 2 was a woman; also had "right smart"—couldn't say how many.

Mr. R. had seven or eight behind the house, and 10 or 12 over by the barn. He did not know just the number. My companion told me that it was considered unlucky to count the "gums," or to sell any. To buy bees on "Hungry Neck," you must make arrangements for the owner to go away from home; then you can go and take them, and leave the pay where it can be found.

Another strange notion was to tell the bees (*in a whisper*) when a death occurred in the owner's family, or the bees would die, too!

One bee-keeper told me that he thought a cross between bees and fireflies would result in a critter that would work night and day. That is "seeing" the *Apis dorsata* man, and going him "one better." St. Michaels, Talbot Co., Md.



Comb Honey vs. Extracted, and Wintering.

BY CHAS. DADANT & SON.

We have received the following letter, desiring our experience on the subject:

TRINIDAD, Colo.

TO CHAS. DADANT & SON:—At the meeting of the Colorado Bee Keepers' Association, held in Denver, in January, one of the prominent honey-producers in the State advocated earnestly the production of comb honey instead of extracted, and asserted, as an objection to working for extracted honey, that the bees become so eager to store honey in the upper story that they neglected to provide themselves with sufficient stores in the brood-chamber to last them over winter. I have not had much experience in producing extracted honey, while you have been working for it for years, so I ask that you will be kind enough to inform me, if you have such trouble, whether you have to feed the colonies from which you have extracted honey, every winter. If not too much trouble, please give me the benefit of your experience. F. O. BLAIR.

This is another instance of the inferiority of the shallow frames over the deeper style. A colony, which is located on 8 or 10 ordinary Langstroth frames, finds itself crowded for breeding-room in the brood-chamber, and when supplied with a large amount of empty combs, in the upper story, the bees naturally are quite prone to take advantage of the space thus furnished, by placing all of the honey in those upper combs. This leaves more breeding-room for the queen, as she remains in possession of all the space below; but the result is that, for the winter, the brood-combs contain too little honey, unless the cooler weather, or the lessening of the yield, in a gradual manner, warns them sufficiently of the approach of cold weather to induce them to place the honey in close proximity to the brood. The Italian bees are more careful in this particular than either the blacks or the hybrids, and are less likely to be caught unawares; but with the shallow hives, in many cases, if only the lower story is left for winter, it will be found that, when extracted honey has been produced, in combs already built, and consequently of easy access, the bees have not enough honey to last them even through the cold weather. As a matter of course, in comb honey production, this happens less often, for combs in sections are considered by them as too remote from the brood, and of uneasy access to the swarm, owing to the numerous partitions between the sections. Then, also, they have to build the combs; and in the fall, as we all know, they build only as much as is absolutely needed on the spur of the moment, and it is filled as fast as built.

When we consider the actions of the bees, in the comparison between comb honey production and the production of extracted honey, we must take one fact into consideration, to which the attention of the bee-keepers was first called by Oliver Foster. It is, that bees dislike to place their surplus in any part of the hive which is not of direct and easy access. In a state of nature, the bees harvest honey for themselves only, and they wish it where they can reach it, not a few at a time, but in a mass. They want this honey above the brood, and where they can at any time, in very cold weather, have it within the cluster, without having to move the cluster in other than an imperceptible motion upwards. The sections are not at all suited for this purpose—they are man's device, for his own convenience, but if the bees could talk they would surely give us to understand that they dislike these small cases which divide the colony, if they must go into them, into fractions that could not withstand the cold. Being unable to speak, they make it plain to us, by their reluctance in working in sections. That is why they are so much more eager to use extracting-combs that seem to them only a continuation of their brood-combs upwards.

There is, however, we think, a method by which one may produce extracted honey over shallow brood-chambers without fearing to have too small a quantity placed in the brood-combs. This consists in crowding the bees, towards the close of the honey crop, so as to compel them to reduce their breeding, and place the honey in all available cells. A knowledge of the climate and of the probable duration of the honey crop in the locality is necessary, of course. It is necessary in every case, if one expects to make the business a success.

In an ordinary season, where the crop diminishes steadily, as the cold weather approaches, there is no necessity to give the bees any warning, for they, of their own accord, usually then crowd the queen out of her breeding-room; neither is it likely to induce natural swarming, for at that time her fertility is lessened, and the need of laying does not impose itself upon her as it does in the beginning. She is also evidently tired of it herself, and does not resent the difficulties which she finds in the way, as she would in the beginning of the season.

With the deeper frames that we use, we have found no difficulty on this score—except in two or three extraordinary seasons, when the crop was cut off all of a sudden by a cold spell, early in the fall. Usually there is a full supply of honey in the upper portion of the brood-combs, when there is a crop at all. The combs that we use, being about two inches deeper than the regular Langstroth frames, this difference, it will be readily understood, is sufficient to make room for a plentiful supply. But we think it always advisable, in the fall, not to give the bees more room in the upper stories than they are likely to fill readily. In the Italian bees, the propensity is very much in the opposite extreme, and it is oftener the case that they crowd the honey so in their brood-combs that there is not enough room left to secure brood enough for a good winter population.

Hamilton, Ill.



Every Present Subscriber of the Bee Journal should be an agent for it, and get all others possible to subscribe for it.

No. 3.—Producing Comb Honey in Michigan.

BY W. Z. HUTCHINSON.

(Continued from page 242.)

In the production of comb honey the use and non-use of comb foundation is an important feature. When bees are handling honey, as they are in the working season, there is more or less of what might be called involuntary wax-secretion. Unless there is an opportunity to use this it is wasted. When honey comes in slowly it is quite likely that sufficient wax is secreted, and that there is abundant time in which to make it into comb, to furnish storage for the honey that is gathered. As the flow increases, honey must be consumed expressly for wax-secretion. Whether such consumption is profitable I am not able to say. The amount of honey consumed under favorable conditions in producing a pound of wax, is a difficult point to decide definitely, but there is no doubt that it is much less than many people suppose. Just how much of the honey consumed goes to support the life of the bees, and just how much is made into wax, is hard to find out. The old estimate of 20 pounds of honey producing one pound of wax is decidedly an error. Later estimates, that place it at five to seven pounds for one pound of wax, are probably much nearer the truth, and show that the consumption of honey even for wax-secretion is not so very expensive. As the flow of honey increases, a point is finally reached where wax cannot be secreted and combs built with sufficient rapidity to furnish storage for the honey. When this point is reached—possibly before—comb foundation can be used with profit.

As a rule, I have never found it profitable to allow the bees to build their own combs in the sections. In a locality where there was only a slight flow, but one that lasted a long time, such a course *might* be followed with profit, but, as a rule, the honey harvest of this locality is short but copious. The only place in which I have found it profitable to allow the bees to build their combs unaided is in the brood-nest of a newly-hived swarm. The profit here does not come so much from the saving in comb foundation, although that is quite an item, as it does from the conditions brought about whereby the bees are induced to store their honey in the supers instead of in the brood-nest. I would give away drawn combs before I would hive a swarm upon them when working for comb honey. The bees will do but little work in the sections until the combs in the brood-nest are filled, and sometimes they won't then. The combs are so full of honey that there is little room for brood. Newly-built comb is always ready for brood-rearing, but the cells of old comb must be cleaned and polished before the queen will lay in them. No such polishing is needed for storage purposes, and, if the yield is good, a large share of the brood-combs will be filled with honey before the queen fairly commences laying.

When there are no combs in the brood-nest, simply starters of foundation, no honey can be stored in it until combs are built, and the honey must from necessity be stored in the sections (set over from the old hive) until comb is built in the brood-nest. Just as soon as a few cells are completed, the queen, being kept out of the supers by an excluder, is ready with her eggs, and continues to follow up the comb-builders. The result is that nearly all of the honey goes into the sections, while the combs in the brood-nest become almost solid with brood. The hiving of the swarm upon the old stand, the contraction of the brood-nest, the Heddon method of preventing after-swarming, compelling the bees to build their own combs in the brood-nest—all these combined throw a great mass of *willing* workers into the sections. These bees have swarmed. The fever is over and passed, and their whole energies are now bent to the gathering and storing of honey. The foundation in the sections gives them an opportunity to store the honey as fast as they can gather it, the tiering-up of the supers allows them plenty of time in which to ripen and seal it, the building of comb in the brood-nest gratifies their natural desire for comb-building, and all goes as merry as the marriage bell. I am satisfied that for this locality no other system of management will give so large yields of surplus comb honey.

Very excellent results may be secured by hiving swarms upon full sheets of foundation; far superior to what may be secured by using drawn combs, but not equalling those that come when only starters are used in the brood-nest. There is more difference in this respect between combs and foundation than there is between foundation and starters only. Of course, the foundation can be drawn out into combs in two or three days, but during even that short time the bees have begun storing their honey in the supers, and, having made a beginning, they are inclined to continue the practice.

To this plan of management there is just one objection,

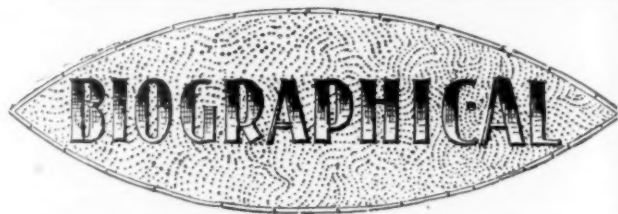
viz.: that perfect combs are not always built in the brood-nest. They may be crooked, or bulged, or drone-comb may be built. The last is the greatest difficulty. When using the Langstroth hive and contracting to only five frames, I never had any difficulty in getting straight combs. The brood-nest was so narrow at the top that all of the combs were commenced at once, grew at the same time, and were brought down to completion as straight as so many boards. With the new Heddon hive the top of the brood-nest is wider, and the center combs are more likely to be commenced some little in advance of the outer combs, and bulging is sometimes the result.

Drone-comb is the result of either an old queen that cannot keep pace with the comb-builders, or that the bees are thinking, perhaps, of superseding, or of using a brood-nest so large that the bees hatch from the first-laid eggs in the center of the brood-nest, and the queen returns to re-fill the cells so emptied before the brood-nest is filled with comb, and when comb is built for store-comb (which would be the case if the queen were not at hand to fill it with eggs), it is quite likely to be drone-comb if honey is being brought in quite rapidly.

As before mentioned, this system of management does not leave the swarm in the best condition for winter. If there is a fall flow, this condition can be easily remedied, simply by adding more combs and allowing the bees to breed and store honey to their heart's content. The same result can be obtained by feeding, and in those localities where natural stores do not always prove wholesome for winter, this lack of stores is really an advantage, as there is no extracting to be done—simply the feeding of sugar. To find bees short of stores in the fall simply because the white honey has been stored in the sections, is not objectionable, as the lack of honey can be supplied with sugar syrup costing only about one-third as much as the honey will sell for. What course to pursue after the white harvest is past will depend upon circumstances, such as whether there is a fall flow, whether it is suitable for winter stores, whether an increase of colonies is desirable, etc. I favor uniting the light colonies soon after the sections are off, as this gives an opportunity for discarding imperfect combs and poor queens, furnishes abundant combs and bees, and lessens the amount of feeding that must be done.

In the next article, "feeding back" will be explained.

Flint, Mich.



MR. J. M. MARVIN.

James Monroe Marvin, the subject of this sketch, and whose photograph appears on the first pages of this issue of the American Bee Journal, was born at De Ruyter, Madison county, N. Y., July 4, 1830. In 1844 he, with his parents, moved from New York to St. Charles, Ills., and he has lived in or near this city from that time up to a recent date. In his early life Mr. M. followed the business of painting, but during that period he became greatly interested in both bees and flowers.

During his earth-life few men enjoyed a wider or better circle of warm personal friends. In business matters he was highly respected for his sterling integrity. He was of a bright, cheerful and sunny disposition, and was always ready and willing to do anything in his power for the happiness or advancement of his friends and acquaintances. He would strip the blossoms from his choicest plants for the friends of the departed, and without a thought of a pecuniary remuneration; and, when necessary, would cheerfully divide the contents of his purse with the living. He was seldom known to speak an unkind word of any person, and, if treated ill, would simply say, and with a smile: "He couldn't help it." During the entire period of his life it is not known that he had an enemy.

As a practical, progressive bee-keeper he attained a very high position among the fraternity, and for many years his opinions on bee-culture were highly respected by all who knew him. Just before and during our Civil War Mr. Marvin was without doubt the most extensive bee-keeper in Illinois. At

one time his home apiary contained nearly 600 colonies of bees. Up to 1862 all of his bees were natives, and in box-hives. In 1862 he adopted the Langstroth hive and the Italian bee. In the course of two or three years his large apiary had undergone a radical change. For several years thereafter he secured each year many tons of comb honey. In 1868 he purchased a honey-extractor, and then for a number of years confined himself mainly to the production of extracted honey. Tons and tons of honey were thus secured each year. Finally *foul brood* made his apiary a visit, and as no attempt was made to fight the disease, his colonies began to disappear rapidly, and soon all were destroyed. For the past few years Mr. M. had taken but little interest in bees, but instead he gave special attention to the growing of small fruits and the production of new varieties of seedling grapes. His vineyard at the present time contains a number of very promising seedlings, but what will now become of them is one of the unsolved problems.

For many years Mr. Marvin was firm in the belief that this earth-life is simply a preparatory state to a better and an unending existence, and he tried to live accordingly. He often said he was ready at a moment's notice to bid adieu to earth-life, and that when the time came for him to depart he was in hopes that he would not be afflicted with a long and painful illness. His desire in that respect was gratified, for he departed this life very suddenly on Friday, March 5, 1896. While eating supper, and apparently in his usual health, he was taken with severe stomach pains, and in less than an hour thereafter he was in spirit-life.

Mr. Marvin left no family—he being a bachelor—but he left one sister and three brothers, besides a multitude of friends and other relatives to mourn his unexpected exit to the mysterious beyond.

M. M. BALDRIDGE.

St. Charles, Ill.

Questions AND Answers

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

To Those Who Desire Answers by Mail.

Notwithstanding I have more than once said in print that I cannot make answer by mail, I still get a good many requests of that kind, and there seems to be a feeling that a stamp enclosed puts one under obligation to send a written answer. A little thought ought to show the unreasonableness of this. If I answer one by mail there's no good reason why I should not answer another, and as in most cases it would be a little more desirable to have an answer by mail sooner than it could be had in print, very few would want answers in print, and a large part of my time would be taken up writing letters. I'm glad to answer as well as I can in print, for in that case I'm paid for it, and many others have the benefit of the answer, so when you ask for an answer please always say in what place you want the answer, and don't expect an exception to be made in your case.

I know it often seems as if a man must be very unaccommodating who will not answer a question by mail that requires only a few words, but sometimes an answer of three words may require an hour of looking up the matter, and, even if it didn't, there's no reason why you should be treated any different from others.

C. C. MILLER.

Large Hives and Swarming.

I am troubled by my bees swarming too much every season. I am using the 8-frame hives as recommended by so many, and find by putting two together (making a 16-frame

hive) that my queens fill 12 to 14 frames solid with brood. Now will using this 16-frame (two-story) hive prevent swarming? and will I get as much comb honey per hive? What do you think of a 16-frame 2-story hive for a brood-chamber, if they average 13 frames solid brood to the hive?

J. B. G.

ANSWER.—You have struck on one of the unsettled questions. Some will tell you that with 16 frames and 13 frames of brood you'll find the bees will not work much in supers. Others say they will. I haven't had a chance to settle the matter from my own experience, as there has been no crop here for the past two years, but if you keep 13 frames well filled with brood I'd at least let them have the chance to try what they'd do in supers with 16 brood-combs. The Dadants claim that with their large hives they don't have five colonies swarm in a hundred, and the probability is that you'll have very much less swarming with 14 or 16 frames than with 8. If you hive your swarms in a single story they'll give you more surplus from the early harvest, but whether hiving on two stories may not be more profitable in the long run is a question. Possibly you might do well to try a few cases of reducing to one story after the early harvest had fairly begun, and then restoring the second story at the close of the early harvest. But you would likely have more swarming by that.

What Hive to Use.

What kind of hive do you use, or would you recommend?

J. B. W.

ANSWER.—I'm trying to find out what hive I want myself, and have some 11-frame hives in use, besides the 8-frame hives I've had for a good while, but most of the new hives I've got lately are the 8-frame dovetail, and I'm in hopes they may be satisfactory by running them part or the whole of the year in two stories.

The Lizard a Bee-Enemy in Brazil.

I am now settled in Olinda, in Brazil, 8° south of the equator. My bees have much to suffer from the lizards that hide themselves under and near the hives, and snap the harmless pets when striking near the ground to enter their homes. What is to be done to remove that enemy?

M. E.

Olinda, Brazil, March 1, 1896.

ANSWER.—I've looked over all the answers I have now in stock, and the only one that seems to fit the case is, "I don't know." Possibly setting the hives up on stakes a foot high, with a good, wide entrance-board for the bees to alight on. Perhaps some one of successful experience will be kind enough to offer something to help out.

Number of Bees in a Quart.

How many pints or quarts of bees will it require to make 4 pounds? There is a man that wants some 2-frame nuclei, and 4 pounds of bees. I have no way to weigh them, only by guess or measure. I want to give him plenty, and would rather give him $\frac{1}{2}$ pound too much than not enough.

J. H. S.

ANSWER.—It isn't an easy thing to be sure about bees either by weight or measure. A good deal has been said and written as to the number of bees in a pound, but I don't believe any man living can tell how many bees are in a pound weighed out before him. It may vary all the way from 3,000 to 10,000. In the first place, there's a difference in the different kinds of bees. Cheshire found that 7 Carniolan workers weighed as much as 10 Cyprians. So take the smallest and bring them down to the starving point, and you may have 10,000 in a pound, while the largest well crammed with honey may go only 3,000 to the pound. For ordinary purposes, it is quite common to consider 5,000 a pound, when bees are not well filled. Less attention has been given to the number in a quart, and I don't believe you will find anything on record that will give any very satisfactory answer. When you come to actual practice, it's doubtful whether you'll want to know anything about the number of bees in a quart, or how much a given number of pounds will measure when measured in a quart measure. The variation would probably be such as to make your measure very unreliable. Get the exact weight of a quart of bees, and in five minutes later it may weigh differently. If the bees are cold and quiet when first weighed, they will be closely packed together, and there will

be a large number in a quart. Then as they become excited and warm up your quart will swell.

As already said, you probably will find it a very difficult thing to get bees to stay in a quart measure long enough to be measured. After you try it I think you'll be glad to turn to the weighing. If you have no convenience for weighing, go to the nearest store and have them weigh whatever you intend to put the bees in. Then when you have your bees fastened in, have them weighed again. Then charge in proportion to the weight, or else fill in a few more if the weight is short. But every bee-keeper who sells honey would do well to have something with which he can weigh.

Probably a Wild Bee.

I send you an insect, of which I found hundreds in my bee-hives this spring. Please tell me what they are, their use, name, etc.

L. C.

ANSWER.—The specimen sent, as nearly as I can judge from its dried and crushed condition, is one of the small wild bees. I'm not entomologist enough to give you its correct name, if indeed I'm right as to its being a bee at all. If it's a bee, it probably came to get some chance at the sweets it smelt in the hive.

Hunting Wild Bees.

1. What is the best bait to be used in summer time when flowers are abundant, in luring or tracing wild bees to their home?

2. What is the best method of hunting wild bees in summer?

E. S. G.

ANSWERS.—1. I don't suppose there's anything better than honey, and if I should venture a guess as to the kind of honey, I should say that with the strongest odor. Making a smudge by burning old comb is practiced by some to get the first attention of the bees.

2. I've no personal experience in hunting bees, except going with A. I. Root a short time one day, and I suspect he wished I was out of the way, but I suppose the orthodox way is to line and cross line. Establish a line by watching which way the bees fly after fairly at work, then go some distance in the same line and try another spot, and so on until you come upon the place. Or, after having one line established, start the bees to work at another spot outside your first line, and then try to find the place where the two lines cross.

You'll probably find it a very difficult thing to get bees to work on bait when flowers are abundant.

Using Old Combs—Cutting Out Queen-Cells.

1. There is a man in this place who had six colonies die for want of food. The boxes or hives are full of empty comb from one end to the other. Would any of this comb do to use? It seems to be all right.

2. Mr. Newman tells in his book how to prevent bees from swarming, by cutting out the queen-cells. I don't understand it rightly. I don't know what time in the spring to do this, nor how often.

It is very windy here, and everything is fresh and green, but bees are working right along, rain or shine. We have had hardly any winter.

R. W.

Coal Gate, I. T., April 11.

ANSWERS.—1. The old combs are all right to use again, and are valuable. Even if they're not entirely clean and nice, the bees will make a nice job cleaning them up, only if they're very bad don't give too many of them at a time to the bees.

2. Cutting out queen-cells will not usually prevent first swarms, although it may sometimes. But second swarms may be prevented by cutting out all the cells but one. Lift out the frames about 6 or 7 days after the swarm issues, and break off or cut out all the queen-cells but one, saving one of the largest and best looking. But you can generally prevent the issuing of second swarms in a way that has been many times given. When the swarm issues, hive it on the old stand, and set the old hive close beside it. In six or seven days move the old hive to a new place a rod or so away, and a large number of the field-bees will join the swarm, and this will weaken the old colony so much that it will in all probability give up all thought of swarming. You will make the matter more sure if you move the hive at the time of day when the bees of the old hive are out for a play spell, just before the young bees begin to return to the hive.

Question-Box.

In the multitude of counsellors there is safety.—Prov. 11-14.

Winter "Honey" Production—Will Old-Time Honey-Seasons Return?

Query 11.—1. Could bees produce honey in January. If they were kept in a warm building and fed bountifully on sugar syrup? I am told it is being done here in Ohio, and the honey sold for one-fifth the price of genuine comb honey.

2. Do you think the time will ever come again when bees will do as well as they did 10 or 12 years ago? I mean in the locality of Ohio.—COLUMBUS.

G. M. Doolittle—1. This is a "fake." 2. Possibly, if the same conditions exist.

R. L. Taylor—1. I guess not. One-fifth the price! Poppycock. 2. Yes, surely.

W. R. Graham—1. Bees cannot make honey out of sugar. 2. I see no reason why they should not.

Prof. A. J. Cook—1. Not long. The bees would soon go where the wildwood twineth. 2. I do not. Man destroys more bloom than he adds.

Rev. M. Mahin—1. No. 2. I do not know how it may be in Ohio, but I do not expect them ever to do as well in Indiana as they did in earlier years.

B. Taylor—1. I don't believe they could. 2. I do not know. Here in Southern Minnesota I have but little hope of again reaping old-time honey-crops.

Mrs. L. Harrison—1. No! Honey is the product of flowers. The Creator never intended bees to be fed like pigs. 2. Solomon says, "What has been will be again."

W. G. Larrabee—1. I don't know. I am afraid there is some mistake about this, for the sugar can't be bought for one-fifth the price of comb honey. 2. I don't know, but I am afraid not.

J. M. Hambaugh—1. No. It would simply be sugar syrup, and should receive the condemnation of all honey-producers. 2. In some localities, yes; others, no. Generally speaking, I fear not.

E. France—1. No. Bees do not make honey if you feed sugar syrup. The bees will store it the same as you give them. 2. No. The timber is cut off, the fields are cultivated, the old-time bee-pastures are destroyed.

H. D. Cutting—1. If you know just "a little bit" about bees, does it look reasonable to you? Don't believe it for a moment. 2. I will not venture an opinion, but I would like to see two wet seasons in succession.

C. H. Dibbern—1. I see no reason why "honey" could not be produced as suggested in January, but I am sure it would not be profitable at double the usual price. 2. Yes, the good years will surely come again.

G. W. Demaree—1. Certainly not. It would be out of "season" in the month of January for bees to build combs if the thing was possible at all. It is evident

that that scientific "sugar-honey" idea—bees "making honey" out of sugar—will "bear fruit" for some time to come. 2. It will depend much upon the peculiar turn agriculture may take. I don't know about Ohio. But here in blue-grass Kentucky the tobacco crop is destroying bee-forage.

Dr. J. P. H. Brown—1. No. Sugar syrup would still be sugar syrup, though deposited in the comb. 2. I don't see why they shouldn't do as well if the same conditions could be restored. Here is a big field for bee-savants to explore.

Dr. C. C. Miller—1. I don't believe it. Even if I believed any one could get the honey produced they wouldn't be such fools as to sell for 3 cents a pound. Wouldn't need to, and would lose big money by it. 2. I don't know any reason why it may not come again.

Emerson T. Abbott—1. Bees cannot produce honey out of sugar syrup in January, nor at any other time. We hear a great many things in these days that are not so. A vast deal of the "honey" made out of sugar syrup is the result of an over-fertile imagination. 2. I do not know anything about the possibilities of honey in Ohio.

Allen Pringle—1. No. Neither in January nor in any other month can bees produce honey from sugar syrup. Don't try to do it, or advise anybody else to try. 2. The Ohio men must answer this question. I do not think bees will ever do as well again in any locality where the forests have disappeared, without special planting and sowing.

P. H. Elwood—1. This is as bad as the artificial comb and glucose filling. The capacity of the average man for being humbugged is great, or such stories could never circulate. 2. Not if your forage has been destroyed. If not, old crops will return. However, we are apt to remember the large crops longer than the small ones or the failures. Not all sunshine years ago.

Eugene Secor—1. I advise you to try that yourself on one colony; and when you have produced the first 10 pounds of honey, you will know that you can't believe all you hear or read. If it does not cost you 5 times the price of honey, I'll miss my guess.

"Behold, we know not anything;
I can but trust that good shall fall
At last—far off—at last, to all—
And every winter change to spring."
—TENNYSON.

J. E. Pond—1. I don't think it would be practicable to do so. At any rate they can't produce honey from sugar syrup. 2. I do not know of any reason why they will not. Bee-keepers owe all the trouble there is in the matter to themselves. When they learn wisdom from sad experience, times will improve. It is just such matters as are involved in Part 1 of this question, that causes much of the trouble that now exists.

James A. Stone—1. I would not think the colony would be strong enough to gather any surplus syrup at that time. As to honey, they never can gather or produce it from sugar syrup. Keep your ears open and you can hear anything. But if a bee-keeper is doing what "Columbus" is told is being done, he ought to, and will be, boycotted. 2. Yes. When bee-keepers learn that their bees must have pasturage the same as their animals.

PERSONAL MENTION.

MR. L. D. STILSON, editor of the Nebraska Bee-Keeper, reported, April 17, that "Bees are doing finely this spring." That's the general report up to this time—April 18. Hope it will continue.

DR. C. C. MILLER, of Marengo, Ill., has been appointed a commissioner to the Presbyterian General Assembly which meets for about 10 days at Saratoga, N. Y., May 21. It is the highest honor conferred on a layman in the Presbyterian church. And the Doctor well deserves it.

MR. ALLEN PRINGLE, of Selby, Ont., in the April Review, lets the daylight in upon the doings of the Ontario Bee-keepers' Association. Some things will hardly bear the light of day, and we'll be glad to see how the Ontario stands it. Mr. Pringle usually knows his ground before he stands upon it.

EDITOR HUTCHINSON, of the Review, expects to attend the meeting of the Philadelphia Bee-keepers' Association, May 16, and read an essay on "The Production of Comb and Extracted Honey." Every bee-keeper within 100 miles of the "City of Brotherly Love," ought to be present to meet and hear Mr. Hutchinson.

MRS. J. M. NULL, of Miami, Mo., we regret to learn, has been sick all the past winter, and under the doctor's tender care. Mrs. Null is one of Missouri's best bee-keepers, and could tell quite an experience if she were so inclined. We hope she may speedily recover, and be equal to her former self, when we had the pleasure of meeting her—at the World's Fair and St. Joseph conventions of the North American.

MR. HASTY, in Review, asks us what we would advise him to do, seeing he is over 200 pages in arrears in reviewing the American Bee Journal. We would advise him to do just as he pleases, and we will promise to be satisfied. So now he can't go wrong. But if Mr. Hasty attempts to recapitulate all the good things some people say they find in the Bee Journal, he'll not run out of material for his Review department very soon.

MRS. J. N. HEATER, of Columbus, Nebr., spent the winter in the South with Mr. Heater, returning home about April 15. She found her bees in fine condition, not a single colony lost in wintering. Mrs. H. is probably the most prominent lady bee-keeper in Nebraska. Our readers know her by her replies in the "Question-Box" for several years past. We had the pleasure of meeting both Mrs. and Mr. Heater at the World's Fair convention. They are a jolly couple.

MR. THOMAS G. NEWMAN and wife, with their daughter (Mrs. F. H. Chenoweth) and her two children, all started for California last Thursday, April 23. They left the Union Depot at 2:40 p.m., where we went to "see them off," and say good-bye. A number of their friends and relatives went to the station to see that Mr. Newman and family had safely begun their long journey toward the "Land of Sunshine." They expected to reach Los Angeles on Tuesday, April 28, where they were to spend a day or two, and then continue on their way to San Diego, where they will make their home. Mr. Newman's many bee-keeping friends will be glad to welcome him to California, and Chicago will hardly again seem the same to us without him. Our best wishes go with Mr. Newman and family, for many years of good health and happiness in their new home in the "Sunset State."

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY

GEORGE W. YORK & COMPANY,

118 Michigan St.,

CHICAGO, ILL.

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\$1.00 a Year—Sample Copy Sent Free.

[Entered at the Post-Office at Chicago as Second-Class Mail-Matter.]

Vol. XXXVI. CHICAGO, ILL., APR. 30, 1896. No. 18.

EDITORIAL COMMENT

The Annual Report of the convention of the Nebraska State Bee-Keepers' Association for 1895 is received. The meeting was held at Omaha, Sept. 17, 18 and 19. The Report contains 30 pages. Mr. E. Whitcomb, of Friend, and Mr. L. D. Stilson, of York, Nebr., are respectively President and Secretary of the Association. Nebraska is one of the very few States that issue a pamphlet report of the annual bee-convention.

A Report in one of our late bee-exchanges reads as follows:

"My bees were taken out of the cellar in fine shape March 20. Only 2 dead out of 157; but a lot more may die before June."

We should presume that if the "shape" of the bees was all right last fall, when put into the cellar, their "shape" shouldn't change much during the winter. He probably meant their "condition" was fine.

Then he lost "only 2 out of 157" bees. Just think of it—only 2 bees lost! But then, he says he put in only 157 bees! He most likely meant that 2 colonies died out of 157. Why don't people say what they mean? We "don't know."

North Carolina Experiment Station.—Some months ago we received the following letter from Mr. W. H. Pridgen, of Creek, N. C., but in some way it was mislaid, and "turned up" only a week or so ago:

MR. EDITOR:—Inclosed find a clipping which explains itself. It is a step in the right direction, and I hope will be the means of educating the people of North Carolina in bee-keeping, that others who are now ignorant of the pleasure and profit in the pursuit, may learn to enjoy the sweets that go to waste.

W. H. PRIDGEN.

The clipping referred to in the foregoing letter reads thus:

BEE-CULTURE AT THE EXPERIMENT STATION.

The North Carolina Experiment Station has recently completed arrangements for carrying on some work in bee-culture, both to disseminate information as to the best methods to follow in bee-keeping, as well as to conduct tests to determine what plans should be adopted in North Carolina to make this particular industry as profitable as possible. In many sec-

tions of the State bee-culture now yields handsome returns when carefully managed. With proper use of the improved methods of late years this result might be largely increased. It will be the purpose of the Station to endeavor to aid in the extension of the industry, and with the possible improvement of the culture where it has now found a foothold. For this purpose the co-operation of two experienced bee-keepers has been secured—Dr. J. W. Hunter and Mr. W. H. Hall, both of Forsyth county. It is expected that results interesting to bee-keepers will be reached during the coming season. In the meantime, items of timely interest will be distributed upon the various phases of the subject.

As the Station desires to enter into correspondence with every bee-keeper now in North Carolina, each one is cordially requested to send his name and address to Dr. H. B. Battle, Director, Raleigh, N. C. Any items as to the colonies, hives, etc., on hand, and the success or failure heretofore met with, will be gladly received. Doubtless the correspondence will be mutually helpful.

We believe this is the first Southern State to recognize bee-culture in this way. We hope that much good may result, and that other States will imitate the good example set by North Carolina. We should be pleased to publish some of the apian reports issued by this Station.

Prof. Cook, in the Rural Californian for March, gives these three "Bits of Nectar," among others:

BEEES NOT A NUISANCE.—And now comes news of a suit in Europe to show that bees are a nuisance, and not to be tolerated in certain precincts. The decision was with the bees; that it is too late in the world's history to make, much more to enforce, such a claim. God has given us bees for a great purpose. There can be no greater folly than an attempt at their banishment. Any such an attempt must prove as foolish as it is vain.

BEE-STING REMEDIES.—Ammonia has long been recognized as one of the best antidotes for bee-sting poison. There is reason in this. The poison is acid, and the ammonia in neutralizing the acid, seems to neutralize the poison as well. In a late number of Nature it is suggested that an ammoniacal extract of quinine is even more effective than ammonia alone. Bee-keepers who are much troubled with stings may well try this new remedy.

KEEP COOL WITH BEES.—There is a prevailing opinion that bees are especially cross to some people. As a teacher of apiculture, who has often had very large classes, numbering at times from 30 to 50, I have had good opportunities to test this theory, but never found any reasons for adopting it. If one is more susceptible to attack and stings than another, it is only because he is nervous and quick in his work and movements. Harsh behavior the bees resent, and usually attempt to punish.

Importation of Apis Dorsata.—On page 217 we requested all who answer in the "Question-Box" department, to let us know their opinion as to the advisability of going to the expense of importing Apis dorsata. So far only three out of 25 have responded, and their replies follow:

I am thoroughly convinced that a great deal more is being made out of the importation of Apis dorsata than the circumstances warrant. It will cost but little to secure a few of these bees to test their merits, and I do not think that the Government should be asked to go to large expense in order to make any experiments along this line. There are other things of more importance to bee-keepers than the importation of these bees, which should have attention first.

This agitation seems to be mostly in the interest of one man, who seems to want the job of going after Apis dorsata. It would be better, it seems to me, to wait until he has shown a disposition to deal fairly and honestly with his fellow bee-keepers as to some matters he now has in hand before he receives any new commissions.

I for one do not think that under the circumstances these bees would prove to be a very valuable addition to the wealth of the bee-keepers of the United States.

EMERSON T. ABBOTT.

I must say I think it a little premature for a local society to attempt a thing of this kind. It should come before the North American at its next meeting, and it would have more influence than a dozen local societies.

The petition says it is the wish of the majority of progress-

sive bee-keepers of this country. I have my doubts about it, as I don't think the majority know one thing about it at the present time. Now, if the *Apis dorsata* is what we want, and it will be a benefit to this country, then I hold up both hands for it. But do we want the *Apis dorsata*?

The Australians wanted the rabbits, but they don't want them now. We wanted the sparrows, but we don't want them now. We have the imported currant-worm, but we don't want it any more. We have the Cyprian bees, but how many want them now? We have many imported insects, birds, quadrupeds and bipeds that we wish we did not have. So I will suggest that all parties go slow, and know just what they are doing with them in their native home. If the drones from *Apis dorsata* only fly after sundown, how are we to use them for any benefit to our queens, if any benefit it will be?

I would like to hear from our good friend D. A. Jones, who spent thousands of dollars investigating the different varieties of foreign bees. Mr. Jones did a great work, and we should always hold him in grateful remembrance.

H. D. CUTTING.

I hardly know how to reply to the request as to the matter of importing the big Indian bee. Two men who have seen it in its native place are hopeful that it might be successfully and profitably introduced. Gravenhorst thinks there is no reason why it might not cross with the smaller bees. Others think differently. I think it is Baldensperger who says it is impossible to domesticate it, and the only attempts in that line that I ever read about were utter failure. Cheshire thinks its introduction would not be valuable, and says: "Fortunately, it is in the very nature of things impracticable to 'hybridize' our bees with *dorsata*." If it is thought advisable to make any effort with regard to it, it would be a good deal cheaper, I should think, to have the experiment made near or on its own ground. If it cannot be kept in a hive there, or if it cannot be crossed with other bees, it is not worth while to bring it here.

The wording of the petition given on page 217, would have to be changed to get the signatures of well-informed bee-keepers. The statement, "It is believed that these bees would be of great advantage," etc., is probably the reverse of the truth, if the general belief is meant; and it is equally far from correct to say that in desiring the introduction of *dorsata*, "we represent the sentiment of a majority of the progressive bee-keepers of the country."

Probably the strongest argument in favor of *dorsata*, providing it could be successfully introduced, is that on account of its size it could work on red clover. If we want the Government to help toward securing honey from red clover, why not work in a more certain direction? For a tithe of the expense, we could get from France bees whose size has been increased until the length of tongue is much beyond the average. Dr. J. P. Murdock has bees of such size that they are said to work freely on red clover. As to these bees, I know for certain that they build worker-comb very nearly as large as drone-comb, their drone-comb being proportionately increased in size.

On the whole, would it not be better to spend money in getting what is less problematical, or in first finding out whether *dorsata* is worth anything if it should be introduced?

C. C. MILLER.

Comment from us on this subject is hardly necessary, even were we competent to speak on the subject. Prof. Cook has referred to the matter favorably, on page 227, so that makes four out of 25 who were asked to express their opinion. Three practically against the importation of *Apis dorsata*, and one for it—so far as heard from. Well, if that is any indication of the minds of the "progressive bee-keepers of the country," it would seem that they are not yet tumbling over each other in their rush to have the "big Indian bee" brought to our shores.

The Mesquite Tree.—Among the trees whose blossoms yield nectar may be named the mesquite, which grows in certain parts of the United States. In the Pacific Rural Press we find the following paragraphs concerning mesquite and its uses:

As is well known to those familiar with this tree, it is useful in many ways to the people of Mexico and the southwestern part of the United States. Its roots and wood are excellent for fuel; the gum is used for dyeing, and also as a medicine; the leaves and pods, or beans, as they are usually

called, are valuable forage for stock, and are also prized by Mexicans and Indians as food. These "beans" consist of an outer husk or pod, and of hard kernels. The pods are agreeable to the taste, and very nutritious. Their food-value largely depends upon the sugar contained, as high as 24 per cent. having been found in them. The kernels are exceedingly hard, and are not digestible by animals when swallowed. Analyses, however, show them to be very nutritious, and if a way could be found to utilize them the value of the "beans" for stock would be much increased.

The flowers of the mesquite yield an excellent honey, and in this way the tree is of commercial importance to the bee-keepers of the regions where it grows.

These many uses make it desirable to avoid needless destruction of this tree, and although it is a slow grower, it would probably in the long run be of advantage to plant it, since it is especially adapted to arid surroundings, and will thrive in situations where most trees will perish.

This tree and its products have been undergoing careful examination at the hands of Prof. Forbes, Chemist of the Agricultural Experiment Station at the University of Arizona.

A Foul (Brood) Joke.—In the Canadian Bee Journal for April we find that at the last Ontario convention a certain member raised this question, in all seriousness: "Should not the public be made acquainted with the fact that a person has foul brood." (Italics ours.) The idea of a "person" having foul brood! Whenever that happens, no doubt the public will not need to be specially informed—they'll find it out soon enough. Of course the question had reference to a person's bees, though it was not so printed.

Big Bees of Cochín China.

In looking over an old volume of the American Bee Journal, I came across the following under the title—

A CHINESE BEE.

"The Apicultural Section of the Entomological Society at its annual meeting in Paris, in August, 1874, made many interesting statements. M. Durand Saint Armand, a government officer in Cochín China, states that the country possesses a bee twice the size of ours, which, consequently, ought to extract the honey from red clover which is known to be very abundant. This bee is found in great numbers all along the coast, in a wild state, in hollow trees, and the natives hunt them for their wax. The extensive forests of this country are leased for the product of wax which is to be sold to the Chinese."

Here then would appear to be our bee twice the size of *Apis mellifica* and living like them in hollow trees. Can not our bee-keeping friends in France give us more information in regard to these bees? I believe a large portion, if not all, of Cochín China is now in the hands of France. I should not now have thought so much of this statement had I not in conversation with a returned missionary learned of the same or a similar bee, under domestication by the Chinese in western China. As he was a young man, a native of this town, brought up on a farm, I felt that his statements were worthy of entire confidence. He said the bees of Western China were in size midway between our hive-bees and the bumble-bee, and were, like our domestic bees, kept in hives; and must be of gentle disposition as he had seen a colony clustered in a crowded street yet no one seemed afraid of them. I had hoped before this to have secured specimens of them, but owing perhaps to the unsettled condition of the country I have not as yet received them. I supposed when he first told me of them that they were the *Apis dorsata* which the Chinese had domesticated, but I now think they must belong to another species.—J. E. CRANE, in Review.

Honey as Food and Medicine.—A new and revised edition of this 32-page pamphlet is now issued. It has 5 blank pages on which to write or paste recipes taken from other sources. It is just what its name indicates, and should be liberally distributed among the people everywhere to create a demand for honey. It contains a number of recipes on the use of honey as food and as medicine, besides much other interesting and valuable information. Prices, postpaid, are: Single copy, 5 cts.; 10 copies 30 cts.; 50 for \$1.00; 100 for \$1.75. Better give them a trial. Send all orders to the Bee Journal office.



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 Dear Sirs:—The Sections arrived in due time, and are all O. K. so far as examined. They are simply perfection. I can't see how you can furnish such goods at such low prices. I hope you may live long and do well. Yours respectfully, Z. S. WEAVER, Courtney, Tex.
 Gents:—I received the "Higginsville Smoker" all O. K. It's a dandy; please find enclosed stamps for another. Yours truly, OTTO ENDERS, Oswego, N. Y.
 Gentlemen:—I have bought Supplies from nearly all the large manufacturers by the carload, and I must say yours are as good as the best. Indeed, in many lines they are the best. It is a pleasure to handle them. E. T. FLANAGAN, Belleville, Illinois.

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GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

General Items.

Bees in Fine Condition.

Bees in this locality are in fine condition, but later than usual about swarming. They are beginning to store some surplus honey.

I am well pleased with the improvement in the American Bee Journal, and think it better this year than it has ever been before.

J. B. GRIFFIN.

Cat Creek, Ga., April 14.

Wintered Fairly Well.

My bees have wintered fairly well, especially those that I wintered in the cellar. I left three of my best colonies out-doors, and lost two of them, and the queen out of the other one, and with one or two like experiences, I have come to the conclusion that out-doors is no place for me to winter bees.

C. W. GERRISH.

Rochester, N. H., April 15.

Bees Eating in Winter.

On page 190, Mr. Cotton again requests me to forward at least part of the premium which was offered by me in my first article on the above question. But he has failed to reply to my last article. Now, if the circumstances which I drew his attention to, in my last, and which I asked him to explain, were so insignificant that he saw fit to ignore them entirely, I will treat his last with the same consideration, withhold the premium, and holler "Nuf," until he does.

D. W. HEISE.

Bethesda, Ont.

Gelsemium for Rats.

In answer to Mr. Pringle's inquiry, since cats are barred, tell him to take the flowers of the yellow jessamine (Gelsemium), and put them where rats can have easy access. They will be eaten greedily, and the result will be sudden death, without any other bait being needed.

This may interest my friends in the Southern States more than Mr. Pringle, as I don't think the Gelsemium grows so far north.

ENGLISH B. MANN.

Wewahitchka, Fla.

Stray Thoughts by "Bro. Ben."

* HONEY OF FARMER BEE-KEEPERS.—I hardly think that speech of F. Rauchfuss, on page 181, is complimentary either to specialists or farmer bee-keepers. If the honey of the latter is poor, why need it injure the prices of the former? As a matter of fact, so far as my observation goes, the farmers' honey is superior to that of some specialists. This is owing to the fact that they allow the bees to ripen and cap the honey before it is extracted, thereby insuring a better flavor. Having used this kind of honey some 20 years in preference to that of others, I do not speak unadvisedly.

THE AMALGAMATION.—If there is any thoughts among bee-keepers of wishing to influence legislation by the Union, there should be no foreigners in it. What business would American bee-keepers have in Canada, trying to influence lawmakers, or vice versa? Have strictly a United States Union, and make it also an Exchange, and the number of members will, I believe, be greatly increased.

Let this Exchange buy up that cheap farmers' honey; get all the pure honey produced, and they can then set a fair living price, and at the same time make it impossible for the adulterator to get in his deadly work, as he cannot get honey to flavor with. I verily believe a Union of this kind would commend itself to a vast majority of bee-keepers wherever located. As it is now, the benefit derived from the

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15Atf Mention the American Bee Journal.

Union is mostly to those who get into some kind of litigation, and to those who by their nearness to place of meeting can attend the conventions.

Let a Union and Exchange be formed in one, so that it will benefit all members, and I would not long hesitate to pay the necessary \$10 to become a life member, and help create the necessary funds to buy that farmers' cheap honey. **BRO. BEN.**
Mapleton, Iowa.

[We might say for the benefit of those who have been mailing various things to "Bro. Ben," that he simply uses that title as a nom-de-plume. So whatever is mailed to "Bro. Ben" never reaches him or any one else.—Ed.]

Bees Wintered Well.

My bees have wintered well so far. Some have to be fed shortly if we do not get warm weather and fruit blooming soon.

The American Bee Journal is a welcome visitor every week. **PETER BLUNIER.**
Roanoke, Ill., April 8.

Bees Appear in Good Condition.

We had no honey last year. I have 55 colonies of bees in the cellar yet. They appear to be very quiet, and I think they are in good condition. **H. PEARSON.**
Natural Dam, N. Y., April 11.

The Season of 1895.

My report for 1895 is as follows: Six hundred pounds of comb honey, and 200 pounds of extracted, from 8 colonies, spring count, and increased to 15. **P. J. KLEIN.**
Greenwood, Wis., April 11.

A Good Report for 1895.

Last year I bought one colony of bees, and got 300 one-pound boxes full of honey, and 8 swarms of bees, which, with the one I bought, made 9 colonies. I put them into the bee-cellar, and they are all right.

I want to say to Mr. Snow, of Osakis, that the above is a true count, and I can get plenty to swear to it. I will say for Mr. J. Z. Rhodes, that his report is not correct. I asked him why he didn't put it in correctly, and he replied that he was afraid people would think he was lying. Now, Mr. Snow, if Mr. Rhodes doesn't make out a correct statement, and swear to it, I will have him fined! **MERRITT OSBORN.**
Verndale, Minn.

A Northern Bee-Man in Virginia.

At the age of 50, and after about 40 years of honest toil and industry, and by practicing economy, without indulging in vice, rum or tobacco, we found ourselves, with God's blessing, with what we considered enough of this world's goods to see our (that is, wife and I) way through to the end of life's journey. Therefore, I retired from business, and sought a winter's home in this place, to avoid the cold blasts and long winters of the North, which, to us, it seemed were threatening our physical existence. And now, after nine winters' trial, we feel well repaid and pleased with the change. I think this climate has been a sort of strength restorer to us, and would not swap it for any squad of doctors, and drug-store nostrums by the ton, for persons in like condition of health.

I have kept from 40 to 60 colonies of bees for the last 30 years. I left over 50 up at my Northern home (Middletown, N. Y.) last fall, and have 17 here. I think there are about 100 colonies kept within a radius of two miles from us. We bought the stock we have here, and it appears to be a mixture of Italian, black, and perhaps some Cyprian blood, as the bees are prone to use

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12A13 Mention the American Bee Journal

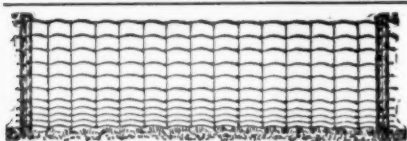
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This phrase expresses the frontiersman's idea of security, and experience has taught him that a yielding limb or sapling makes a safer "hitch" than a solid rock. Some wire fences will safely hold even a pulling horse, hitched to the middle of a panel. The owner of that fence will tell you it was made by PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

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TEXAS QUEENS.

If you are in need of Queens, let me have your order. Price-List Free.

8A26t J. D. GIVENS, Lisbon, Tex.

their business-end quite freely, and also are great swarmers.

Last spring I left them in April, gave every hive two sets of Langstroth frames, one above the other, except a few that had a set of frames six inches deep on top, but many of them swarmed, so the people said, and decamped, as there was no one to look after them that understood the business, and the man that I expected to assist was sick. Now, some claim that bees will swarm here anyway you fix them, but I think not, and believe the same bee here, with like treatment and conditions as at the North, will perform the same, every time. At the North, 20 years ago, we were troubled beyond endurance with over-swarming, but after we got the Italian bee, and supplied different conditions, our trouble was at an end, and now we have to force our swarms if we get enough natural ones to supply or make up our usual winter losses.

Bees winter here with but little loss, except from lack of stores. Last November I introduced 11 pure Italian queens. Some I divided into three colonies, and it is wonderful how these little colonies have pulled through. I now expect to ship some of these colonies North this spring, to reinforce the weak ones up there. Still, this will be useless unless we have a better season up there than we did last year, for bees here gathered a surplus, while up there I had to feed to get them in a condition for winter.

CHESTER BELDING.

Claremont, Va., March 24.

Clipping the Queens' Wings.

There is a time to feed bees, and a time not to feed; a time to contract the brood-nest, and a time, again, to enlarge it; a time to put on section-cases, and a time to take them off; a time when bees will swarm, and I know there is a time when they will sting.

There was a good deal said about clipping and non-clipping of the queens' wings, but I do not remember seeing anything as to the proper or best time to clip them—except not to do so before the queen is fertilized. It is very nice and pleasant when a colony swarms, to go in front of the hive and pick up the clipped queen, place her in an empty hive, and let the bees do the rest while you wait. Last summer I found a clipped queen 10 feet from her hive, in the grass. They had swarmed two days before. The bees had balled her, and she had been out in the open air for two days and nights. Some man may say he would rather not have his queens clipped, for they are too liable to come out and get lost in the grass. Well, I would rather the queen would get lost, than to have the queen and whole colony come out and fly away, which they are liable to do if you are not on hand at the time. You may lose the clipped queen, but the colony of bees will return if the queen is unable to go along.

It has been my custom, whenever I found the queen (after she was fertilized), to clip her wings, but my experience from slight observation is, that if you have a colony that is doing well, and the queen is laying nicely, you had better let her alone, for fear the clipping of her wings will make her stop laying for a time. Will not some one with more experience tell me if this is not true, if there is not a proper time to clip the queens' wings, and just when that is?

Brooklyn, N. Y. I. N. HOAGLAND.

How He Began Bee-Keeping.

Thank you, Mr. Ball, for what you have to say on page 203. Your remarks are short and to the point, and come from my own State. If you will take notice, the most of the big honey and bee stories come from some far-away State or country, which seems strange, as I know of quite a number of bee-keepers in this State, there being no less than six within three miles of me. Now, is this State a poor pasture for bees, or don't we feel at liberty to tell what we know about bee-keeping, honey crops,



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T. F. BINGHAM, Farwell, Mich.

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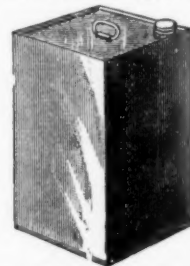
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No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "fancy white," "No. 1 dark," etc.

CHICAGO, ILL., Apr. 23.—We quote: Fancy white, 15c.; No. 1 white, 12@13c.; fancy amber, 9@10c.; No. 1 amber, 7@8c.; fancy dark, 8@9c.; No. 1 dark, 7c. Extracted, white, 5@7c.; amber, 4@5c.; dark, 4@4½c. Beeswax, 30c. The number of sales are few, and prices are really nominal. The only activity shown is in a little fancy comb and beeswax.

R. A. B. & Co.

PHILADELPHIA, PA., Apr. 22.—We quote: No. 1 white, 9@10c.; fancy amber, 8@9c.; fancy dark, 7@8c. Extracted, white clover, 10c.; amber, 5@5½c.; dark, 4@4½c. Beeswax, 25@26c. Comb honey is dull. Extracted in fair demand. Beeswax lower. W. A. S.

KANSAS CITY, Mo., Apr. 18.—We quote: No. 1 white, 13@14c.; No. 1 amber, 11@12c.; No. 1 dark, 8@10c. Extracted, white, 5@6c.; amber, 4½@5c.; dark, 4@4½c. Beeswax, 25c. C. C. C. & Co.

BUFFALO, N. Y., Apr. 20.—We quote: Fancy white, 15@16c.; No. 1 white, 13@14c.; fancy dark, 8@9c.; No. 1 dark, 7@7½c. Beeswax, 25@28c. Trade very dull and honey not moving, except a few fancy lots; anything dark is hard to sell. B. & Co.

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C. F. Muth & Son, Cincinnati, Ohio.
E. Kretschmer, Red Oak, Iowa.
G. B. Lewis Co., Watertown, Wis.
James Reynolds Elevator Co., Poughkeepsie, N. Y.
Louisiana Bee-Keepers' Supply Manufactory,
Donaldsonville, La.
Page & Lyon, New London, Wis.

and many other Dealers. All agree in saying that no goods are better than ours.

Those of our customers who formerly bought through Thos. G. Newman can get our Foundation in **Chicago, Ill.**, by addressing us at **118 Michigan Street**. We keep no other goods there.

We make a specialty of **Veils and Veil Stuffs** of best quality, cotton and silk.

"LANGSTROTH ON THE HONEY-BEE"—Revised.

Bee-Keepers' Supplies, Smokers, Sections, Tin Pails, etc.
Samples of Foundation and Tulle FREE with Circular. Instructions to beginners with Circular. Send us your address.

CHAS. DADANT & SON,
Mention the American Bee Journal. **HAMILTON, Hancock Co., ILL.**

26c Cash Paid for Beeswax!

For all the **good, pure yellow BEESWAX** delivered to our office till further notice, we will pay 26 cents per pound, cash; or 30 cents for whatever part is exchanged for the American Bee Journal, Books or Seed, that we offer. If you want **cash promptly** for wax, send it on at once. Dark or impure wax not taken at any price. Address plainly,

George W. York & Co., 118 Michigan St., Chicago, Ill.

Lower Prices on Sections & Foundation

Improved facilities, increased output, and competition, together with hard times, tend to lower prices.

Root's No. 1 White Extra-Polished Sections

are superlative in quality, and are now offered for a short time at the following special prices for 4 1/4 x 4 1/4 any stock width: **1000, \$2.50; 2000, \$4.50; 3000, \$6.45; 5000, \$10.00.**

Cream Sections of such widths as we have in stock at 25c per 1000 less than the white.

The New Weed Process Comb Foundation

is superior to all others in every way, showing, from recent tests in Florida, five times greater resistance to sagging, making it possible to use a lighter grade with more feet to the pound, with greater safety than with the old process. Owing to decline in wax we reduce price of Foundation **3 cts.** a pound. Prices now are:

	Price per lb. in lots of 1 lb.	10 lbs.	25 lbs.	50 lbs.
Heavy or Medium Brood Foundation.....	44c	43c	42c	40c
Light Brood.....	47c	46c	45c	43c
Thin Surplus.....	54c	53c	52c	50c
Extra-Thin Surplus.....	59c	58c	57c	55c

Lower prices on 100-lb. lots, and dealers supplied at special prices.

These wholesale dealers who handle Root's Goods in carload lots unite with us in above prices:

Walter S. Pouder, Indianapolis, Ind.; John Nebel & Son, High Hill, Mo.
Joseph Nysewander, Des Moines, Iowa; Wm. A. Selser, Philadelphia, Pa.
M. H. Hunt, Bell Branch, Wayne Co., Mich.; Geo. E. Hilton, Fremont, Mich.

THE A. I. ROOT CO., MEDINA, OHIO.

118 Michigan St., Chicago, Ill.
1024 Mississippi St., St. Paul, Minn.

Syracuse, N. Y.
Mechanic's Falls, Maine.